

STCG D&D Subgroup Meeting Minutes

June 4, 1996

METC Response to Hanford's D&D Technology Needs (Shannon Saget)

METC is the first of the EM Focus Areas to respond in writing to Hanford's technology needs submittal last January. See handout for details. Jerry White suggested that someone should analyze METC's response to see if they are really responding to our needs. The results of this analysis should be input into the Site needs database that Kim Koegler is developing for Shannon as part of the Integrated Contractor Team (see discussion below on this team). Then we should meet with METC to share the results of our analysis. First, we need to meet with the user points of contact to get better definition of the needs. We may also need to get more information on the METC technology development activities. For example, it appears that METC is addressing our tritium removal need (under Basin Water Cleanup Technologies), but not the basin visibility problem. We need to talk to a user at N-Basin to see how they resolved their visibility problem and were able to remove the spent fuel.

Next METC Large-Scale Demonstration Projects (Shannon Saget)

Shannon passed out copies of the new RFP, which states that proposals are due to METC on July 29. We need to review our draft proposals at the next Subgroup meeting (July 2) and present more polished versions at the Management Council meeting on July 17. They must be ready for the DOE-RL concurrence process on July 22. We will need a cover letter from either John Wagoner or Ron Izatt documenting STCG endorsement for the proposals.

Two proposals are currently being planned: 1) 324 B-Cell and 2) a 200-Area canyon facility with a metal melter. In FY97, METC plans to fund two new large-scale demos. They plan to fund more in FY98, but they may not need another solicitation if they receive enough good-proposals this time. EM-50 will spend up to \$5 million per large-scale demo. Each demo must have an Integrating Contractor Team to manage it, as explained in the RFP. This team is responsible for the technology work and for inserting

technologies into the large-scale projects at the appropriate points. They will function as sort of a Board of Directors for the technology demo. METC wants all the sites to use Florida International University and the Corps of Engineers (for developing comparable cost estimates of the new technologies and the baseline technologies) as subcontractors if possible.

C-Reactor Large-Scale Demonstration Status Report (Steve Pulsford)

Shannon presented the status report at the METC mid-year review meeting, and the BHI project manager (Greg Eidam) was there to answer the technical questions. The conceptual design is complete, and BHI is working on the final design, the project management plan, the communications plan, and several other items. They are now on the Hanford homepage on the Internet. Please take a look at their homepage information and send any suggestions for improvement to Steve.

The second meeting of the C-Reactor Technology Assessment Screening Team was held on May 23-24, 1996. The team confirmed the technology selection screening criteria and finalized a list of 20 technologies in each of the technical areas. Approximately 20 new technologies will be demonstrated during the course of the large-scale demo.

B-Cell Laser Cutting Demonstration Project Status (Keith Pauley)

Keith and Shannon were working with the Navy in Bremerton to get their 3-kW YAG laser for use in the B-cell demo, but it is no longer available. The demo will start on July 1 with a different 3-kW laser that will either be purchased or leased. A cold test will be done first. A wide variety of cutting is planned using a remote manipulator arm. A contaminated process tank will be cut up in B-cell. Dosimetry will be included on the fiber optic cable to monitor radiological deterioration of the optics. The laser will be deployed by October 1 and they will be cutting throughout FY97 and FY98. This laser could also be used as an innovative decontamination technology for C-Reactor in the future. Another potential innovative application is cutting asbestos. This cannot be done in the B-cell demo because there was not time to secure the necessary permits.

Keystone Initiative (Shannon Saget)

DOE/EM and DOE/ER are sponsoring a stakeholder workshop on June 27-28 in Richland to assist in developing a long-term research agenda for DOE's environmental management and restoration needs. The workshop will build on existing stakeholder involvement at Hanford by inviting 30-40 representatives of the Hanford Advisory Board, the STCG, and the National Academy of Sciences. The workshop will be organized and facilitated by the Keystone Center, a mediation and consensus-building organization. The workshop results will help DOE formulate a proactive research agenda for the development of the newly established Environmental Management Science Program (EMSP) and open a dialogue among stakeholders on the necessary long-term research agenda for site cleanup. Carol Henry from DOE/ER will present additional information on the Keystone Initiative to the STCG Management Council at their June 19 meeting.

Results of Subgroup brainstorming on potential D&D basic research topics:

Cutting Technologies

- Is there preferential volatilization of chromium from cutting stainless steel?
- Radiation-hardened optics

Decontamination Technologies

- Penetration profiles into concrete and metal surfaces (also for bare concrete versus concrete with a fixative on the surface)

Characterization Technologies

- Characterization of alpha contamination through various materials (e.g., hot cells, vents, ducts)
- Low concentrations of niobium in stainless steel
- Ability to survey materials to designate them for free release

Basin Water Cleanup Technologies

- Better understanding of membrane/tritium interactions

Treatment of Process Liquids

- Innovative treatment of process liquids

Fixatives

- Effects of time and radiation on fixatives over long time periods
- Fixatives that wick contaminants out of concrete surfaces

Integrated Contractor Team Activities (Loni Peurrung)

Loni briefly described the Integrated Contractor Team, which includes staff from PNNL, WHC, and BHI and is funded by EM-50 to support the STCG Subgroups. She mentioned four ongoing activities:

- a comprehensive barrier needs assessment for the Hanford Site
- development of a standard proposal format for the Management Council
- creation and management of an STCG technology needs database
- a quick status report on Hanford's top technology needs

After Loni mentioned the barrier needs assessment, it was stated that dirty canyon facility entombment is a D&D barrier need (i.e., capping the top).

Meeting Attendees

Bob Julian (Ecology)
Gary Ballew (ETP)
Jerry White (DCR/TCCP)

Keith Pauley (PNNL)
Shannon Saget (DOE-RL)
Jackie Schmid (WHC)
Jim Goodenough (DOE-RL)
Steve Pulsford (BHI)
Sue Garrett (PNNL)
Loni Peurrung (PNNL)
Linda Fassbender (PNNL)

Handouts (copies available from Linda Fassbender)

- Response from METC to Hanford STCG on Hanford's D&D Technology Needs
- New METC RFP for D&D Large-Scale Demonstration Projects
- Status report on C-Reactor Cocooning Large-Scale Demonstration
- Hanford D&D Needs (submitted to METC in January 1996)
- Announcement of new METC homepage on the Internet
- Letter from Nuclear Fuel Services, Inc. to Gary Ballew in response to his request for information on NFS's capabilities in glovebox D&D